

Serial No. 10/584,096
Reply to Office Action of November 27, 2009

Amendments to the Drawings:

The attached sheets of drawings include changes to Figs. 1-5. These sheets which include Figs. 1-5 replace the original sheets including Figs. 1-5. In Figures 1-5, annotations requested by the Examiner to aid in clarification of the invention as described in the specification has been added. No new matter has been added to the drawings

Attachment: Replacement Sheets
 Annotated Sheets Showing Changes

REMARKS/ARGUMENTS

Claims 1-14 were presented for examination, claim 9 being previously canceled, leaving claims 1-8 and 10-14 pending in this application. In an Official Office Action dated November 27, 2009 claims 1-8 and 10-13 were rejected. Claim 14 was objected to as being dependent on a rejected claim but would be found allowable if rewritten in independent form including all limitations of the base claim and any intervening claims. The Examiner also objected to the drawings. The Applicant thanks the Examiner for his consideration and addresses the Examiner's comments concerning the claims pending in this application below.

Applicant herein replaces Figures 1-5 and respectfully traverses the Examiner's prior rejections. No claims are currently cancelled and no new claims are added. These changes are believed not to introduce new matter, and their entry is respectfully requested. By making the statements herein, the Applicant has not and is not narrowing the scope of the protection to which the Applicant considers the claimed invention to be entitled, and does not concede, directly or by implication, that the subject matter of such claims was in fact disclosed or taught by the cited prior art. Rather, the Applicant reserves the right to pursue such protection at a later point in time and merely seeks to pursue protection for the subject matter presented in this submission.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding rejections and withdraw them.

Drawing Objection

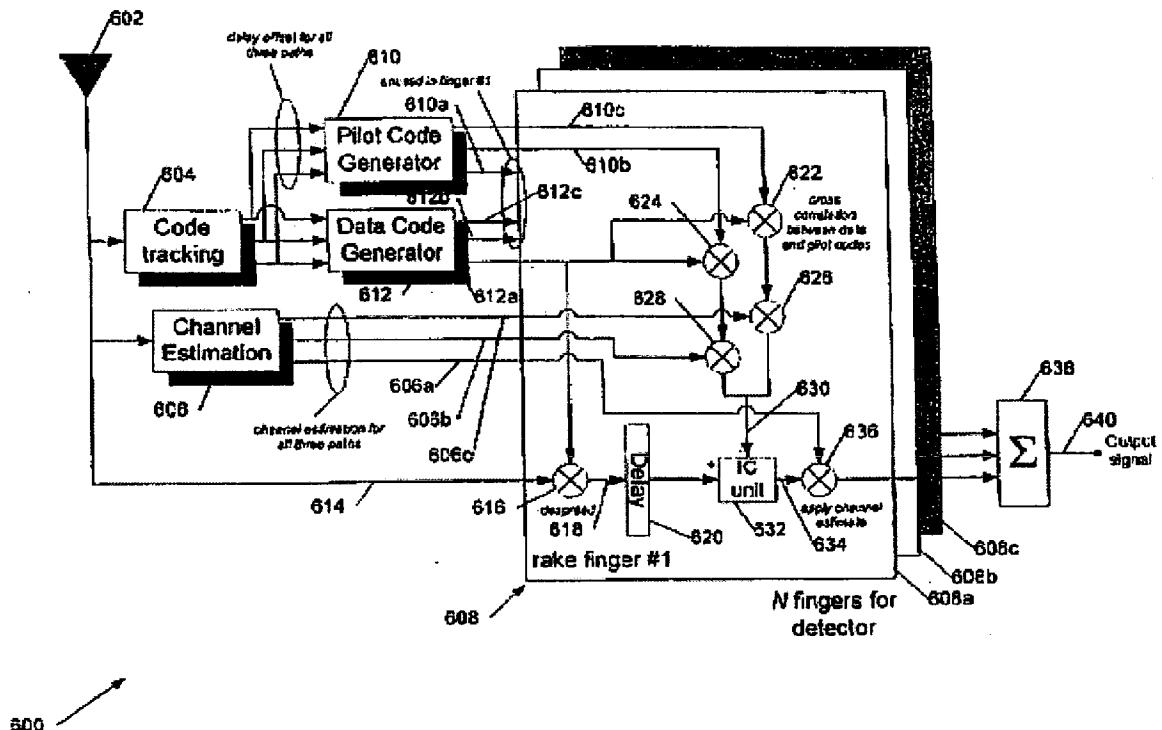
In the Office Action, the Examiner objects to the drawings, stating that unlabeled rectangular box(es) should be provided with descriptive text labels.

As presented in the interview of December 17, 2009, the Applicant herein replaces Figures 1-5 with drawing sheets including descriptive annotations supported by the text of the specification. No new matter has been added. The Applicant believes that these annotations should suffice to aid one skilled in the relevant art to fully understand and appreciate the present invention. Reconsideration and a specific response is respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 1-8 and 10-13 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent Publication No. 2004/0028121 issued to *Fitton* ("Fitton") in view of U.S. Patent No. 7,313,114 issued to *Karjalainen* ("Karjalainen"). Applicant respectfully traverses this rejection for at least the following reasons.

In a previous response, the Applicant argued that the Examiner's construction of Fitton and Karjalainen failed to meet the requirements of obviousness in that Fitton does not disclose the use of correlators as claimed. As previously presented, the Examiner's argument fails to consider that in Figure 6, the interference cancellation 632 occurs after the unscrambling process carried out by the correlators 622, 624 and multipliers 626, 628 (see para [0103] of Fitton).



As one skilled in the art would recognize, conventional interference cancellation is performed after descrambling for practical considerations, so as to allow operations to be conducted at a reduced frequency. Indeed, arranging the interference cancellation after the descrambling/despread process allows operation at a reduced frequency of 15 kHz, while the same operation performed before the descrambling/despread operation would require organizing subtractions at a frequency of as much as 3.8 MHz. For this reason conventional systems are based on the use of a subtractor placed after the unscrambling process. The arrangement of the subtractor before an unscrambling cannot be considered commonplace or routine, or as a simple rearrangement of the prior art.

The present invention claims “... evaluating the contribution of interferences of data caused by the channel said means for respectively evaluating the contribution of interferences including a plurality of correlators, wherein each correlator receives scrambling codes of other links that contribute to the interference....” While Fitton uses the correlators to unscramble the codes and then remove interferences, the present invention uses correlators prior to the subtraction of the interferences to evaluate the contribution of interferences from the scrambled codes. The correlators are not used to unscramble the codes.

The Examiner also asserts that Figure 9 of Fitton “clearly shows cancellation [of interferences] is performed before the unscramble means.” USPTO Response, page 10. Figure 9 of Fitton shows a respread component 924 prior to the interference cancellation unit 910. (see below)

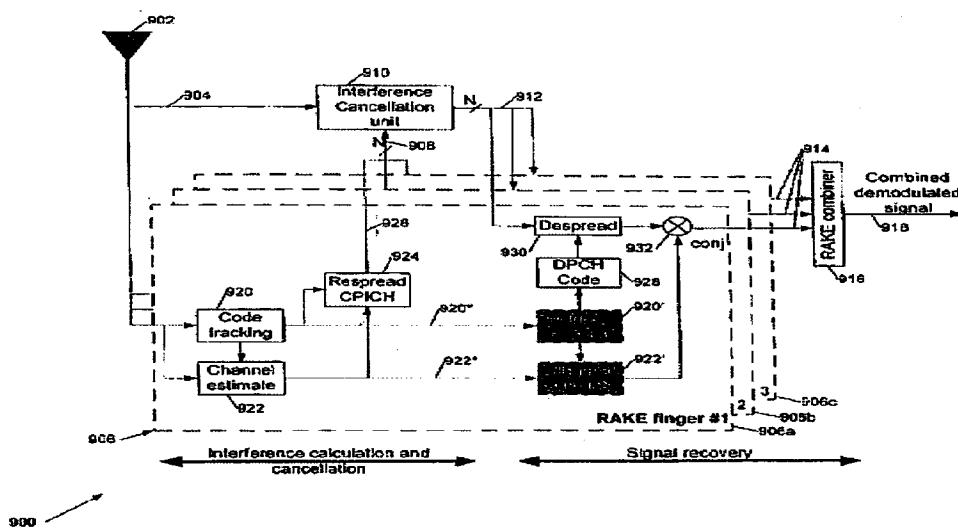


Figure 9

The Examiner then wrongly concludes that despreading 930 is the same as unscrambling and thus Figure 9 shows interferences cancelled prior to unscrambling. The Examiner confuses the meaning of the terms “respread”,

“despread” and “unscrambling.” Unscrambling is **NOT** the equivalent of despreading. Unscrambling, as defined by the Webster on-line dictionary is to make scrambled messages comprehensible, the removal of the scrambling process. The prefix “de” also means removal or negation. Thus despreading means to remove or negate “spreading”. Spreading is in itself the making of an otherwise random or tangled operation comprehensible, thus “despread” is more akin to scrambling than unscrambling. Similarly respreading is an initiation of the spreading process much like unscrambling.

Taking this understanding of the terms of respreading and despreading, one skilled in the art can see that Figure 9 shows an unscrambling of the code **PRIOR** to the cancellation of the interferences. This unscrambling of the codes prior to interference cancellation is consistent with the other teachings of Fitton and in direct opposition to that which is claimed by the Applicant, that is that the interferences are cancelled and then they are unscrambled. Fitton teaches a conventional process by which codes are first unscrambled, (spread or respread) and then the interferences are removed. The present invention is distinct from Fitton since it first removes the interferences and then unscrambles the codes.

As previously argued conventional systems such as Fitton operate at a reduced frequency of 15kHz while the proposed construction by the Examiner would require subtractions at a frequency of as much as 3.8MHz. Since the processor requirements for such a construction are substantial, placing the removal of interferences prior to unscrambling would not be an obvious modification nor would they be considered feasible by one skilled in the art. To support this conclusion a 1.132 Affidavit by one skilled in the art accompanies this Amendment stating that prior to the present invention, conventional removal of interferences is conducted at a frequency of approximately 15kHz and modifying prior art systems to cancel interferences prior to unscrambling would

require organizing subtractions at a frequency of as much as 3.8 MHz. In the cited expert's opinion, an increase in subtraction frequency would not be commonplace or routine.

In view of all of the above, the claims are now believed to be allowable and the case in condition for allowance which action is respectfully requested. Should the Examiner be of the opinion that a telephone conference would expedite the prosecution of this case, the Examiner is requested to contact Applicant's attorney at the telephone number listed below.

No fee is believed due for this submittal. However, any fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

Respectfully submitted,

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